

AMENDMENTS TO THE CLAIMS

1 1. (Currently Amended) The method of claim 52 further comprising:
2 importing data into a the database, residing wherein the database resides on a computer
3 system;
4 constructing a the schema object to represent a schema of the database; and
5 manipulating the database using the an aggregate classifier based on the schema object,
6 wherein the aggregate classifier includes multiple classifiers of the database.

1 2. (Previously Presented) The method of claim 52 further comprising:
2 defining a plurality of classifier definitions corresponding to the schema of the database;
3 and
4 mapping the classifier definitions to columns and tables in the database.

1 3. (Original) The method of claim 2 wherein said defining step defines a “property”
2 classifier which interacts with a single column on a single table in the database.

1 4. (Original) The method of claim 3 wherein said defining step further defines an
2 “object” classifier which contains one or more of the “property” classifiers.

1 5. (Original) The method of claim 3 wherein said defining step defines a “split-
2 object” classifier which makes more than one “object” classifier appear as a single classifier.

1 6. (Original) The method of claim 5 wherein said defining step further defines a
2 “join” classifier which identifies how multiple “object” classifiers database objects are linked in
3 a “split-object” classifier.

1 7. (Original) The method of claim 5 wherein said defining step defines a “mapped
2 property” classifier as a special form of the “split-object” classifier to manage data stored in a
3 table of the database which serves as an index to another database table.

1 8. (Original) The method of claim 2 wherein said defining step defines a
2 parameterized classifier which is a template for classifiers that are instantiated when associated
3 parameters are provided.

1 9. (Original) The method of claim 1 further comprising the steps of:
2 modifying the schema of the database;
3 constructing a second schema object for the modified database; and
4 manipulating the modified database using the second schema object.

1 10. (Currently Amended) The method of claim 9 wherein said step of constructing
2 the second schema object includes the step of re-writing classification definitions of the database,
3 wherein the definitions are stored on the computer system.

1 11. (Original) The method of claim 1 wherein said constructing step includes the step
2 of writing classification definitions stored on the computer system using a field-based language.

1 12. (Original) The method of claim 11 wherein said writing step uses XML.

1 13. (Currently Amended) The method of claim 1 wherein said constructing step
2 includes the step of writing database classification definitions stored on the computer system.

1 14. (Original) The method of claim 1 wherein said importing step parses an import
2 file to import the data.

1 15. (Original) The method of claim 13 wherein said manipulating step includes the
2 step of an application, residing on the computer system, interacting with a composite object
3 included in the classification definitions.

1 16. (Currently Amended) The method of claim 1 wherein said manipulating step
2 includes the step of generating a SQL SELECT query using the a query generator of the
3 intermediary code.

1 17. (Currently Amended) The method of claim 1 wherein said manipulating step
2 includes the step of generating a SQL INSERT query using ~~the a~~ query generator.

1 18. (Currently Amended) The method of claim 1 wherein said manipulating step
2 includes the step of generating a SQL UPDATE query using ~~the a~~ query generator.

1 19. (Currently Amended) The method of claim 1 wherein said manipulating step
2 includes the step of generating a SQL DELETE query using ~~the a~~ query generator.

1 20. (Original) The method of claim 16 wherein said generating step includes the step
2 of an aggregate classifier interrogating the schema object to determine how different classifiers
3 correspond to columns and tables in the database.

1 21. (Currently Amended) The computer system of claim 54 further comprising:
2 program instructions stored in the memory and adapted to construct the schema object to
3 represent the schema of the database; and manipulate the database using ~~the an~~
4 aggregate classifier based on the schema object.

1 22. (Previously Presented) The computer system of claim 54 wherein the program
2 instructions define a plurality of classifiers corresponding to the schema of the database, and map
3 the classifiers to tables in the database.

1 23. (Previously Presented) The computer system of claim 22 wherein the program
2 instructions further define a “property” classifier which interacts with a single column on a single
3 table in the database.

1 24. (Original) The computer system of claim 23 wherein the program instructions
2 further define an “object” classifier which contains one or more of the “property” classifiers.

1 25. (Original) The computer system of claim 22 wherein the program instructions
2 further define a “split-object” classifier which makes more than one “object” classifier appear as
3 a single classifier.

1 26. (Original) The computer system of claim 25 wherein the program instructions
2 further define a “join” classifier which identifies how multiple “object” classifiers are linked in a
3 “split-object” classifier.

1 27. (Original) The computer system of claim 25 wherein the program instructions
2 further define a “mapped property” classifier as a special form of the “split-object” classifier to
3 manage data stored in a table of the database which serves as an index to another database table.

1 28. (Original) The computer system of claim 22 wherein the program instructions
2 further define a parameterized classifier which is instantiated when associated parameters are
3 provided.

1 29. (Original) The computer system of claim 21 wherein the program instructions
2 construct a second schema object when a structure of the database is modified.

1 30. (Currently Amended) The computer system of claim 29 wherein the program
2 instructions construct the second schema object by re-writing classification definitions stored in
3 the memory ~~means~~.

1 31. (Original) The computer system of claim 21 wherein the program instructions
2 construct the schema object by writing classification definitions stored on the computer system
3 using a field-based language.

1 32. (Currently Amended) The computer system of claim 21 wherein the program
2 instructions generate a SQL SELECT query using ~~the~~ a query generator of the classification
3 engine.

1 33. (Currently Amended) The computer system of claim 21 wherein said
2 manipulating step includes the step of generating a SQL INSERT query using ~~the a~~ query
3 generator.

1 34. (Currently Amended) The computer system of claim 21 wherein said
2 manipulating step includes the step of generating a SQL UPDATE query using ~~the a~~ query
3 generator.

1 35. (Currently Amended) The computer system of claim 21 wherein said
2 manipulating step includes the step of generating a SQL DELETE query using ~~the a~~ query
3 generator.

1 36. (Original) The computer system of claim 32 wherein the program instructions
2 further direct an aggregate classifier to interrogate the schema object to determine how different
3 classifiers correspond to columns and tables in the database.

1 37. (Currently Amended) The computer system of claim 21 wherein the program
2 instructions construct a composite object to interact with an application program residing in said
3 memory ~~means~~.

1 38. (Currently Amended) The computer program product of claim 56 further
2 comprising:

3 program instructions stored on said storage medium for constructing the schema object to
4 represent the schema of the database residing on a computer system; and
5 manipulating the database using ~~the an~~ aggregate classifier based on the schema
6 object.

1 39. (Currently Amended) The computer program product of claim 56 wherein the
2 program instructions define a plurality of classifiers corresponding to the schema of the database;
3 and map the classifiers to tables in the database.

4 40. (Original) The computer program product of claim 39 wherein the program
5 instructions further define a “property” classifier that interacts with only a single column on a
6 single table in the database.

1 41. (Original) The computer program product of claim 40 wherein the program
2 instructions further define an “object” classifier which contains one or more of the “property”
3 classifiers.

1 42. (Original) The computer program product of claim 39 wherein the program
2 instructions further define a “split-object” classifier which makes more than one “object”
3 classifier appear as a single classifier.

1 43. (Original) The computer program product of claim 42 wherein the program
2 instructions further define a “join” classifier which identifies how multiple “object classifiers”
3 are linked in a “split-object” classifier.

1 44. (Original) The computer program product of claim 42 wherein the program
2 instructions further define a “mapped property” classifier as a special form of the “split-object”
3 classifier to manage data stored in a table of the database which serves as an index to another
4 database table.

1 45. (Original) The computer program product of claim 39 wherein the program
2 instructions further define a parameterized classifier which is instantiated when associated
3 parameters are provided.

1 46. (Original) The computer program product of claim 38 wherein the program
2 instructions construct a second schema object when a structure of the database is modified.

1 47. (Original) The computer program product of claim 46 wherein the program
2 instructions construct the second schema object by re-writing classification definitions stored on
3 the computer system.

1 48. (Original) The computer program product of claim 38 wherein the program
2 instructions construct the schema object by writing classification definitions stored on the
3 computer system using a field-based language.

1 49. (Original) The computer program product of claim 38 wherein the program
2 instructions generate a search query using the schema object.

1 50. (Original) The computer program product of claim 49 wherein the program
2 instructions further direct an aggregate classifier to interrogate the schema object to determine
3 locations of different classifiers in the database.

1 51. (Original) The computer program product of claim 38 wherein the program
2 instructions construct a composite object to interact with an application program residing on the
3 computer system.

1 52. (Currently Amended) A method allowing application programs to access a
2 database ~~through an interface, wherein the interface includes knowledge of a schema of the~~
3 ~~database using intermediary code that provides information associated with a schema of the~~
4 ~~database to the application programs,~~ the method comprising:

5 receiving a request to the ~~interface intermediary code~~ from one of the application
6 programs to access the database;

7 providing to the requesting application ~~an aggregate classifier based on classifier~~
8 ~~definitions of a schema object, wherein the schema object includes a~~
9 ~~representation of a schema of the database data that includes the information~~
10 ~~associated with a schema of the database, wherein the information includes~~
11 ~~classifiers corresponding to columns and tables in the database;~~

12 receiving one or more requests from the requesting application ~~relating to transferring~~
13 ~~data between the requesting application and the database;~~

14 interrogating ~~the a schema object for location information of classifiers of the database to~~
15 ~~obtain location information for classifiers in the database that are associated with~~
16 ~~the one or more requests;~~

17 providing the location information of the classifiers to the requesting application;
18 associating data search constraints from a request the one or more requests of the
19 requesting application with locations in the database; and
20 generating a query to the database based on the search constraints.

1 53. (Previously Added) The method of claim 52 further comprising:
2 returning results of the query to the requesting application.

1 54. (Currently Amended) A computer system comprising:
2 a database;
3 a memory ~~storing a database and~~ storing program instructions that allow application
4 programs to access the database through an ~~interface, wherein the interface~~
5 ~~includes knowledge of a schema of the database a database classification engine~~
6 ~~that provides information associated with a schema of the database to the~~
7 ~~application programs,~~ the program instructions being executable to:
8 receive a request to the ~~interface database classification engine~~ from one of the
9 application programs to access the database;
10 provide to the requesting application ~~an aggregate classifier based on classifier~~
11 ~~definitions of a schema object, wherein the schema object includes a~~
12 ~~representation of a schema of the database data that includes the~~
13 ~~information associated with a schema of the database, wherein the~~
14 ~~information includes classifiers corresponding to columns and tables in the~~
15 ~~database;~~
16 receive one or more requests from the requesting application relating to
17 transferring data between the requesting application and the database;
18 interrogate ~~the a schema object for location information of classifiers of the~~
19 ~~database to obtain location information for classifiers in the database that~~
20 ~~are associated with the one or more requests;~~
21 provide the location information of the classifiers to the requesting application;
22 associate data search constraints from a request the one or more requests of the
23 requesting application with locations in the database; and

24 generate a query to the database based on the search constraints; and
25 a processor coupled to the memory to process the instructions.

1 55. (Currently Amended) The computer system of claim 54 wherein the program
2 instructions further comprise instructions to ~~returning return~~ results of the query to the requesting
3 application.

1 56. (Currently Amended) A computer program product comprising:
2 a computer readable storage medium storing program instructions for allowing
3 application programs to access a database through ~~an interface, wherein the~~
4 ~~interface includes knowledge of a schema of the database a database classification~~
5 ~~engine that provides information associated with a schema of the database to the~~
6 ~~application programs,~~ the program instructions being executable to:
7 receive a request to the ~~interface database classification engine~~ from one of the
8 application programs to access the database;
9 provide to the requesting application ~~an aggregate classifier based on classifier~~
10 ~~definitions of a schema object, wherein the schema object includes a~~
11 ~~representation of a schema of the database data that includes the~~
12 ~~information associated with a schema of the database, wherein the~~
13 ~~information includes classifiers corresponding to columns and tables in the~~
14 ~~database;~~
15 receive one or more requests from the requesting application ~~relating to~~
16 ~~transferring data between the requesting application and the database;~~
17 interrogate the ~~a schema object for location information of classifiers of the~~
18 ~~database to obtain location information for classifiers in the database that~~
19 ~~are associated with the one or more requests;~~
20 provide the location information of the classifiers to the requesting application;
21 associate ~~data~~ search constraints from ~~a request the one or more requests~~ of the
22 requesting application with locations in the database; and
23 generate a query to the database based on the search constraints.

1 57. (Currently Amended) The computer system of claim 56 wherein the program
2 instructions further comprise instructions to ~~returning~~ return results of the query to the requesting
3 application..

4 58. (New) The method of claim 52 wherein the intermediary code is a software
5 enabled classification engine.